

We claim:

1. A pseudodevice for communicating between a network-resident software application and a user device, the pseudodevice comprising:
 - a first port for communications between the network-resident software application and the pseudodevice;
 - a second port for communications between the pseudodevice and the user device;
 - a first interface function associated with the first port for receiving a request from the network-resident software application and for sending a response to the network-resident software application; and
 - a second interface function associated with the second port for sending an instant message in a format adapted for communication with an instant messaging client resident on the user device, and receiving an HTTP request, providing a selected response to a received HTTP request, and sending an HTTP response in a format adapted for communication with an HTTP client on the user device.
2. The pseudodevice of claim 1, wherein the request from the software application further comprises:
 - query parameters.
3. The pseudodevice of claim 2, wherein the query parameters further comprises:
 - a query type;
 - query strings;
 - a target username; and

a source username.

4. The pseudodevice of claim 3, wherein the query type further comprises:

a type display for use in displaying strings to the user device;

a type choose for offering a menu of choices; and

a type prompt for requesting information to be entered.

5. The pseudodevice of claim 1 further comprising:

a session ID generator for assigning a unique session ID for a request;

a request table for maintaining a unique session ID mapping to the software application that initiated the request;

an instant messaging message formatter for formatting a message to conform to an instant messaging interface standard;

an instant messaging client/server for use in sending messages to another instant messaging user; and

an HTTP server for receiving HTTP requests, providing a selected response to a received HTTP request, and sending HTTP responses.

6. A method for communicating between a network-resident software application and a user device comprising:

receiving a message request from the network-resident software application;

translating the message request to a hyperlinked instant message to the user device in a format adapted for communication with an instant messaging client resident on the user device;

sending the hyperlinked instant message to the user device;

receiving an HTTP request from the user device as a response to a user action that was elicited by the hyperlinked instant message;

sending the user device a selected type of HTTP response dependent upon the type of HTTP request received; and

sending a user response to the network-resident software application that initiated the message request for selected types of HTTP requests.

7. The method of claim 6 wherein the message request from the network-resident software application is a display message request.

8. The method of claim 6 wherein the message request from the network-resident software application is a choose message request.

9. The method of claim 6, wherein the message request from the network resident software application further comprises:

a query type;

query strings to be displayed;

a target user name parameter for the instant messaging name of the user device; and

a source user name parameter to specify an arbitrary source.

10. The method of claim 6, wherein the hyperlinked instant message further comprises:

an embedded unique session identifier, unique message type, and unique message identifier for selected message requests that elicit a user response in a uniform resource locator (URL) associated with a hyperlinked text message that is sent to the user

device, where the URL is used by the user device to identify a pseudodevice for sending a response.

11. A method for communicating between a network-resident software application and a user device comprising:

receiving a message request from the network-resident software application;

translating the message request to a hyperlinked instant message to the user device in a format adapted for communication with an instant messaging client resident on the user device;

sending the hyperlinked instant message to the user device;

receiving an HTTP request from the user device as a response to a user action that was elicited by the hyperlinked instant message;

sending the user device a selected type of HTTP response dependent upon the type of HTTP request received;

receiving an HTTP request from the user device as a response to a user action that was elicited by the selected type of HTTP response; and

sending a user response to the network-resident software application that initiated the message request for selected types of HTTP requests.

12. The method of claim 11 wherein the message request from the network-resident software application is a prompt message request.

13. The method of claim 11, wherein the message request from the network resident software application further comprises:

a query type;

query strings to be displayed;
a target user name parameter for the instant messaging name of the user device; and
a source user name parameter to specify an arbitrary source.

14. The method of claim 11, wherein the hyperlinked instant message further comprises:

an embedded unique session identifier, unique message type, and unique message identifier for selected message requests that elicit a user response in a uniform resource locator (URL) associated with a hyperlinked text message that is sent to the user device, where the URL is used by the user device to identify a pseudodevice for sending a response.

15. A computer-readable medium whose contents cause a computer system to perform in a unified real-time manner interactions between at least one network-resident software application and at least one user device, by performing the steps of:

responding to a selected message request from the network-resident software application;

translating a selected message request to a selected instant message format adapted for communication with an instant messaging client resident on the user device;

communicating and adapting the communications with an HTTP client resident on the user device for selected message requests; and

sending a user response to the network-resident software application that initiated the message request for selected message requests.

16. The computer readable medium of claim 15, further comprises:

a pseudodevice software interface function, wherein the pseudodevice software function is used for responding to a selected message request from the network-resident software application, translating a selected message request to a selected instant message format adapted for communication with an instant messaging client resident on the user device, communicating and adapting the communications with an HTTP client resident on the user device for selected message requests, and sending a user response to the network-resident software application that initiated the message request for selected message requests.

17. A computer-readable medium whose contents cause a computer system to perform in a unified real-time manner interactions between at least one network-resident software application and at least one user device, the computer system having a pseudodevice as a unified software interface function that provides an interface between a network-resident software application and a user device, by performing:

responding to a selected message request in the pseudodevice from the network-resident software application;

translating in the pseudodevice a selected message request to a selected instant message format adapted for communication with an instant messaging client resident on the user device;

communicating and adapting the communications between a HTTP client resident on the user device and the pseudodevice for selected message requests; and

sending a user response to the network-resident software application that initiated the message request for selected message requests.